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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,466	06/22/2001	Jun Takahashi	82086-0002	4966
7590 06/30/2004 HOGAN & HARTSON LLP 555 13th Street, N.W. Washington, DC 20004			EXAMINER SCHWARTZ, PAMELA R	
			ART UNIT 1774	PAPER NUMBER

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,466

Applicant(s)

TAKAHASHI ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Claims 1-3, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouri et al. (4642247) in view of Sadasivan (6419356) for reasons of record and for reasons given below.

2. Applicants' arguments filed April 12, 2004 have been fully considered but they are not persuasive. Applicants argue that neither of the references discloses or suggests that the ink-receiving layer include a hydrophilic fixing aid. The examiner disagrees. At col. 6 of Mouri et al., lines 10-28, the reference discloses hydrophilic materials that may be use alone or in combination. The materials include several materials that are hydrophilic fixing aids, for example, quaternized polyvinyl pyrrolidone, cationic starch, and cation-modified polyvinyl alcohol. The paragraph suggests the use of resins that "can retain an ink of several-fold its own weight rapidly and stably." Cationic resins used with anionic dyes will act as fixing aids. In addition, materials that retain ink rapidly and stably can also be considered to be fixing agents. Therefore Mouri et al. do suggest this aspect of applicants' invention.

Applicants also argue that the reference do not teach or suggest inclusion of an ink permeable layer of inorganic filler having at least one hydrophilic group laid bare on a surface of the inorganic filler and with the surface of the filler covered with at least one lipophilic group of surfactants. Once again, the examiner disagrees. From applicants' specification, the examiner has determined that this limitation of claim 1 is accomplished by adding silica and surfactant to the coating composition and stirring prior to application onto a support. Mouri et al. disclose that the upper layer may contain defoaming agents which conventionally are surfactants, and may also contain fillers

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such as silica (see col. 13, lines 11-17 and col. 14, lines 25-33). The upper layer is generally made by the same method as the under layer, i.e. dispersing or dissolving the components, and coating by a conventional technique (see col. 10, lines 3-7 and col. 6, lines 36-50). Dispersion or dissolving steps would include stirring as performed in applicants' examples. Therefore, the reference is considered to inherently result in a medium in accordance with this claim limitation due to the process of forming the layer.

Mouri et al. discloses a medium that may have a defoaming agent present in either or both of the under layer and the upper layer (col. 14, lines 25-41). The upper layer is both an ink-receiving layer and an ink-permeable because the layer promotes penetration of ink into the under layer (see col. 6 line 64 to col. 7, line3).

The secondary reference teaches that use of surfactants with HLB less than 10 will have a defoaming effect (i.e. the surfactant will act as a defoaming agent). It is not relied upon for its teachings concerning the upper or lower layer specifically. One of ordinary skill in the art would have found it obvious to use a defoaming agent from an ink-receiving layer of one ink jet recording medium in an ink receiving layer of another ink jet recording medium when the second medium (i.e. the medium of the primary reference) discloses inclusion of defoaming agents therein, with the expectation that the defoaming agent will act as such in the second medium.

Finally, the motivation to combine references has been clearly set forth. The primary reference generally discloses inclusion of a defoaming agent in an ink receiving layer and the secondary reference discloses particular defoaming agents for use in ink receiving layers. One of ordinary skill in the art would have found the

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suggestion to use a defoaming agent in the primary reference and the particulars of such an agent used in the same art for the same purpose in the secondary reference.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

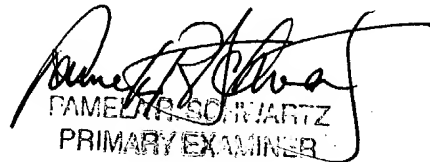
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz

June 28, 2004


PAMELA R. SCHWARTZ
PRIMARY EXAMINER